

adjacent the bottom row of QWERTY keys. Since the keyboard according to the invention is advantageously used as a reduced size keyboard, it may be awkward for the hands to actuate a space bar located conventionally on the main keyboard surface beneath the bottom row of QWERTY keys.

FIG. 14 shows a keyboard 1420 according to another embodiment of the invention in which a space bar 1445 is formed on a surface 1446 that is approximately perpendicular to the main keyboard surface 1447 and adjacent the bottom row of QWERTY keys. In a further embodiment, the space bar 1445 is formed both on the main keyboard surface 1447 underneath the bottom row of QWERTY keys and on the surface 1446.

Each of the embodiments of the keyboard according to the invention discussed so far have incorporated keyboard layouts onto a unitary keyboard. As shown in FIGS. 15A, 15B, 15C and 15D, a keyboard 1540 according to the invention could be formed with two keyboard halves 1540a, 1540b. The keyboard 1540 is thus reduced in size when the keyboard 1540 is not in use.

As shown in FIG. 15A, when the keyboard 1540 is not in use, the keyboard halves 1540a and 1540b are disposed one over the other and held in place by a conventional locking mechanism (not shown). As shown in FIG. 15B, when it is desired to use the keyboard 1540, the locking mechanism is released and the keyboard halves 1540a and 1540b slide away from each other. A fin (not shown) formed on the keyboard half 1540a fits into a slot (not shown) formed in the keyboard half 1540b and maintains the relative position of the two halves 1540a, 1540b as they slide with respect to each other. As shown in FIG. 15C, the keyboard halves 1540a and 1540b slide with respect to each other until the fin formed on keyboard half 1540a slides into the hole 1530. At this point, the keyboard 1540 is fully extended. As shown in FIG. 15D, the keyboard halves 1540a and 1540b are then pivoted with respect to one another such that the fin rotates in the hole 1530 and the keyboard halves 1540a and 1540b form a V-shape with respect to each other. The keyboard halves 1540a and 1540b are formed with a conventional locking mechanism (not shown) such that the keyboard halves 1540a and 1540b may be locked into any one of a number of angular positions with respect to each other. For instance, the hole 1530 could be formed with ridges such that the fin may be ratcheted into one of a plurality of positions.

As shown in FIGS. 15A, 15B, 15C and 15D, the QWERTY keyboard layout is formed in an arced V-shape as in FIGS. 7A and 7C. It is to be understood that the QWERTY keyboard layout according to this embodiment of this invention could likewise be formed without arcs as shown in FIGS. 5A and 5C. Likewise, the particular function key arrangement shown is merely illustrative. Other function key arrangements are within the ambit of this embodiment of the invention. Additionally, though FIGS. 15A, 15B, 15C and 15D show space bars 1531a and 1531b formed on each of the keyboard halves 1540a and 1540b, respectively, it is to be understood that a single space bar could be formed on only one of the keyboard halves 1540a and 1540b.

If the keyboard according to the invention is used with a computer, electronic circuitry is disposed within the keyboard so that when a key is actuated, an appropriate electronic signal is transmitted from the keyboard to the computer. The electronic circuitry may also be configured so that simultaneously actuating particular groups of two or more keys will transmit a different electronic signal to the computer than would actuation of any individual key of the

group. Conventional electronic circuitry used for this purpose may be used with the keyboard according to the invention. The keyboard according to the invention does not require any special configuration or type of electronic circuitry to interface with a computer.

Keyboards according to the invention may include any type of key actuation. For instance, individual keys may be actuated by depressing individually formed key contact surfaces that are attached to a plunger. Depressing the key depresses the plunger such that an electrical contact is made and an electrical signal is sent to the computer. Alternatively, the keys may be formed integrally with the keyboard such that the keys are substantially level with the remainder of the adjacent keyboard surface, and be touch sensitive (in a manner similar to that found in many bank automatic teller machines) such that no appreciable displacement of the key contact surface occurs upon key actuation.

Various embodiments of the invention have been described. The descriptions are intended to be illustrative, not limitative. Thus, it will be apparent to one skilled in the art that certain modifications may be made to the invention as described without departing from the scope of the claims set out below. For instance, in keyboards according to the invention, the finger contacting surface of the keys may be placed at any height above the remainder of the keyboard key surface. Further, the finger contacting surface of the keys may be flat, concave or convex, as desired. Also, the plane defined by the edges of the finger contacting surface may be tilted in any direction at any angle with respect to the remainder of the keyboard key surface, e.g., each finger contacting surface could be tilted toward the center of the QWERTY keyboard layout.

I claim:

1. A keyboard, comprising:

a first group of keys located on a main keyboard surface for accepting commands from a user;

wherein said first group of keys includes keys A, S, D, F, and G arranged in a QWERTY format and said first group of keys have a common shape; and

a second group of keys located on the main keyboard surface for accepting commands from the user;

wherein said second group of keys includes keys L, K, J, and H arranged in a QWERTY format;

the second group is arranged at an angle with respect to the first group so that the first and second groups form a V-shape wherein a vertex of said V-shape is closest to a bottom edge of said main keyboard surface and sides of said V-shape extend from said vertex towards an Upper edge of said main keyboard surface;

said key G of the first group that is nearest said key H in the second group being the same shape as the key H;

a plurality of keys in said first group are arranged in a first arc about one side of said V-shape;

a plurality of keys in said second group are arranged in a second arc about another side of said V-shape and said first and second arcs are the same; and

said key G of the first group and said key H of the second group are positioned adjacent to said vertex of said V-shape and said key G approximately contacts said key H.

2. A keyboard as in claim 1, wherein a first angle formed between the side of said V-shape defined by the first group of keys and a line substantially parallel to said bottom edge of said main keyboard surface is between 20.6° and 75°.

3. A keyboard as in claim 2, wherein a second angle formed between the side of said V-shape defined by the